

DISCUSSION OF THE AMENDMENT

Claims 1, 5-6, 8-15, and 9-22 are active in the present application. Claims 2-4, 7 and 16-18 are canceled claims. Independent Claims 1 and 21 are amended for clarity. For example, the endotherms of the independent claims are now identified as endotherm peaks. Support for the amendment is found throughout the specification and, in particular, the DSC spectrum of the figures.

No new matter is added.

REMARKS

Independent Claims 1 and 21 now recite an electrostatic developer that includes a wax that exhibits at least two endotherm peaks in the DSC curve. The endotherm peaks of the wax of Claim 1 occur within the temperature ranges of 75-90°C and 95-110°C.

Applicants submit that those of ordinary skill in the art recognize that an endotherm occurring in a DSC curve of a material such as a wax may not necessarily form a peak in the DSC curve. As evidence, Applicants submit herewith the international standard for differential scanning calorimetry (DSC), i.e., ISO 11357-1 (submitted herewith). The international standard provides definitions for terms used by those of ordinary skill in the art when characterizing and measuring DSC properties of thermoplastic materials. A peak is defined as follows:

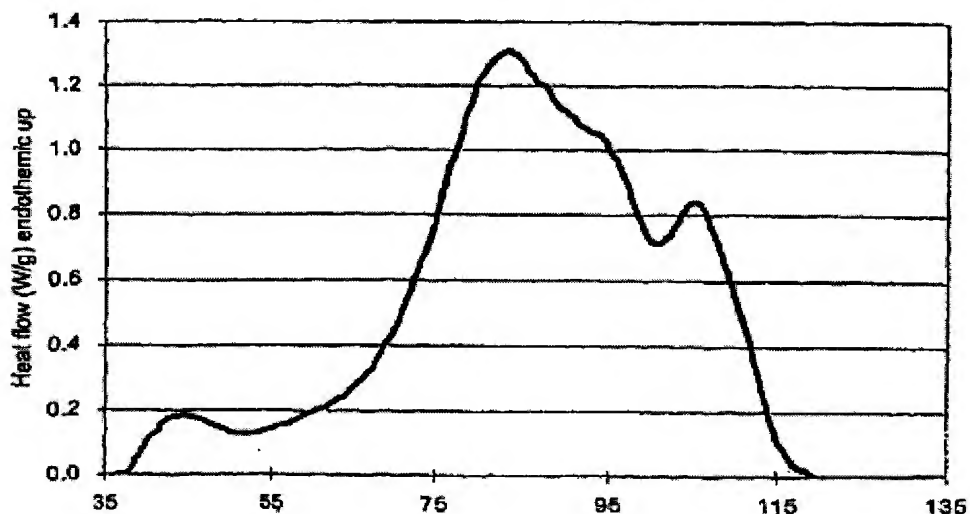
the part of the DSC curve which departs from the baseline,
reaches a maximum, and subsequently returns to the baseline.

See definition 3.9 on page 2 of ISO 11357-1: 1997(E).

Page 4 of the ISO standard provides a figure of a typical DSC curve. The first feature of the typical DSC curve describes a glass transition. Importantly, this first feature is not identified as a peak at least because the deviation from the baseline is in one direction only. The baseline deviation does not subsequently return to the original baseline nor does it reach a maximum. In contrast, the second feature of the typical DSC curve includes a peak identified as T_{pc} . It is readily evident that this feature of the DSC curve shows a departure from the baseline identified by T_{ic} , a maximum (i.e., T_{pc}) and a return to the baseline at T_{fc} .

The figures of the present application describe a wax having two endotherm peaks in the DSC spectrum. FIG. 1b is reproduced below to demonstrate this feature of the claimed invention.

FIG. 1b
Wax-A on Heating



As is evident from the DSC spectrum above, there is a peak maximum in the temperature range between 70 and 90°C and a peak maximum in the temperature range 95-110°C.

Applicants submit herewith information obtained from ASTM International including the ASTM E 473-08. This document provides standard terminology that is used, for example, for describing DSC curves. The definition peak in the ASTM document is consistent with the definition and description in the ISO document (see the definition of “peak” on page 2 of ASTM E 473-08). Applicants also submit herewith ASTM D 3418-99 which is a method describing testing polymers by differential scanning calorimetry (DSC). This method used to determine DSC data references the ASTM E473 and ISO 11357-1 documents. Applicants also submit ASTM D 3417-99 which is a further standard testing method for measuring DSC properties such as enthalpy of fusion and crystallization of polymers by DSC.

Applicants thus submit that those of ordinary skill in the art would agree that Fig. 1b of the present application describes a DSC curve that includes two endotherm peaks.

The Office asserts that it would be obvious to use a wax having two endotherms in a electrostatic developer in view of Tanikawa (US 5,364,722). In particular, the Office is of the opinion that Tanikawa's disclosure of a toner that comprises a hydrocarbon wax having a DSC curve "showing an onset temperature of heat absorption in the range of 50-110°C and at least one heat absorption peak P1 in the range of 70°-130°C giving a peak temperature T_{P1} on temperature increase, and showing a maximum heat evolution peak giving a peak temperature in the range of $T_{P1} \pm 9^\circ\text{C}$ on temperature decrease" (see column 37, lines 9-18 of Tanikawa) is encompassed by a wax having two endotherms.

Applicants submit that Tanikawa does not disclose or suggest the inclusion of a wax having two endotherm **peaks**, a first endotherm peak at 70-90°C and a second endotherm peak at 95-110°C. At best, Tanikawa discloses the use of a wax having an "onset temperature" and a peak in the DSC curve. An onset temperature is not a peak. This is demonstrated, for example, by Figure 1 of Tanikawa and by the technical documents submitted herewith from the ASTM and ISO which provide definitions for terms such as onset temperature. Figure 1 of Tanikawa is copied below for convenience.

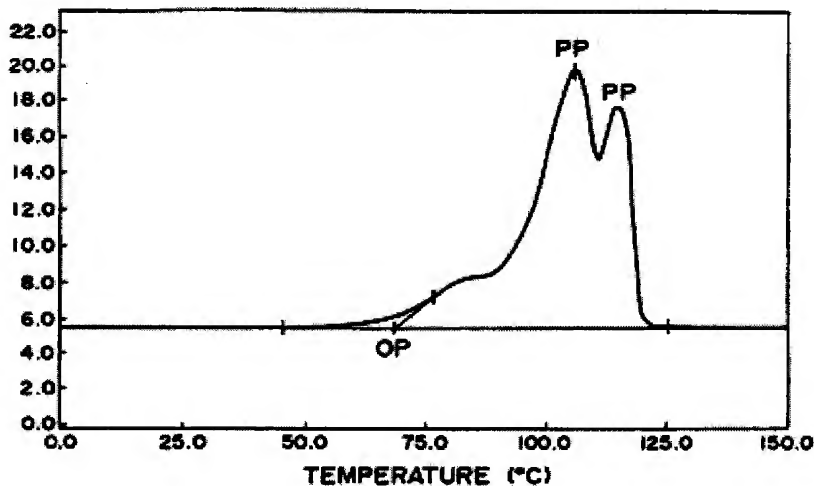


FIG. 1

The temperature "OP" of Figure 1 of Tanikawa is an onset temperature, not a peak temperature. There is only one peak in the temperature range of 70-110°C of Tanikawa. Thus, the Tanikawa wax does not have a first endotherm peak at 70-90°C and a second endotherm peak at 95-110°C.

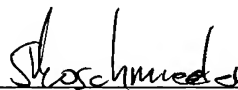
Applicants submit that the art relied on by the Office does not disclose or suggest all of the present claim limitations and thus cannot render the presently claimed invention obvious.

Applicants thank Examiner Chapman for the courteous and helpful discussion of April 10, 2009. During the discussion Applicants' U.S. representative argued that the cited art is silent with respect to a wax having two endotherm peaks in the ranges recited in Claim 1. The Examiner agreed that information describing the art-recognized meaning of "DSC peak" may be helpful in this case.

Applicants request withdrawal of the rejection and allowance of all now-pending claims.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Stefan U. Koschmieder, Ph.D.
Registration No. 50,238

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)